

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A ~~method for identifying frequently accessed domain names in a customer premises equipment that includes a memory and a communication interface, the frequently accessed domain names to be provided to a network gateway for use in domain name system caching, comprising the steps of~~ comprising:

(a) searching files in the a memory of a customer premises equipment to identify the frequently accessed domain names; and

(b) providing the frequently accessed domain names to ~~the~~ a communication interface in a form addressed for delivery to a network gateway, the communication interface transmitting the frequently accessed domain names for transmission to the network gateway configured to cache the frequently accessed domain names in a domain name system cache over a communication path;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

2. (Previously Presented) The method of claim 1, wherein the customer premises equipment runs an operating system, and wherein steps (a) and (b) are initiated during start-up of the operating system.

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3. (Previously Presented) The method of claim 1, wherein the customer premises equipment runs an operating system, and wherein steps (a) and (b) are initiated periodically by the operating system.

4. (Previously Presented) The method of claim 1, wherein steps (a) and (b) occur in response to the execution of an application by a user of the customer premises equipment.

5. (Previously Presented) The method of claim 1, wherein step (a) comprises searching application data files associated with a Web browser application.

6. (Previously Presented) The method of claim 1, wherein step (a) comprises searching application data files associated with an electronic mail application.

7. (Previously Presented) The method of claim 1, wherein step (b) comprises packetizing the frequently accessed domain names and providing the packetized information to the communication interface.

8. (Previously Presented) The method of claim 1, wherein step (b) comprises storing the frequently accessed domain names in a management information base and providing the management information base to the communication interface.

9. (Previously Presented) The method of claim 1, wherein step (b) comprises generating a domain name system query that includes the frequently accessed domain name and providing the domain name system query to the communication interface.

10. (Previously Presented) A method for selectively caching domain name system information on a network gateway that includes a cache, wherein the network gateway is attached to a customer premises equipment that includes a memory, comprising the steps of:

- (a) searching files in the memory to identify a frequently accessed domain name;
- (b) providing the frequently accessed domain name from the customer premises equipment to the network gateway;
- (c) generating, in the gateway, a domain name system query that includes the frequently accessed domain name;
- (d) transmitting the domain name system query from the network gateway to a network for resolution;
- (e) receiving, in the gateway, a response to the domain name system query from the network that includes the frequently accessed domain name and a corresponding IP address; and
- (f) storing the frequently accessed domain name and the corresponding IP address in the cache;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

11. (Previously Presented) The method of claim 10, wherein the customer premises equipment runs an operating system, and wherein steps (a) and (b) are initiated during start-up of the operating system.

12. (Previously Presented) The method of claim 10, wherein the customer premises equipment runs an operating system, and wherein steps (a) and (b) are initiated periodically by the operating system.

13. (Previously Presented) The method of claim 10, wherein steps (a) and (b) occur in response to the execution of an application by a user of the customer premises equipment.

14. (Previously Presented) The method of claim 10, wherein step (a) comprises searching application data files associated with a Web browser application.

15. (Previously Presented) The method of claim 10, wherein step (b) comprises searching application data files associated with an electronic mail application.

16. (Previously Presented) The method of claim 10, wherein step (b) comprises packetizing the frequently accessed domain name and transmitting the packetized information to the network gateway.

17. (Previously Presented) The method of claim 10, wherein step (b) comprises storing the frequently accessed domain name in a management information base and providing the management information base to the network gateway.

18. (Previously Presented) The method of claim 10, wherein step (d) comprises transmitting the domain name system query to a domain name server on the network for resolution.

19. (Previously Presented) The method of claim 10, wherein step (c) comprises generating a domain name system query in accordance with an iterative resolution protocol.

20. (Previously Presented) The method of claim 10, further comprising:

(g) receiving, in the network gateway, a domain name system query from the customer premises equipment; and

(h) resolving, in the network gateway, the domain name system query from the customer premises equipment using a domain name and corresponding IP address stored in the cache.

21. (Previously Presented) A method for selectively caching domain name system information on a network gateway that includes a cache, wherein the

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network gateway is attached to a customer premises equipment that includes a memory, comprising the steps of:

- (a) searching files in the memory to identify a frequently accessed domain name;
- (b) generating, in the customer premises equipment, a domain name system query that includes the frequently accessed domain name;
- (c) providing the domain name system query from the customer premises equipment to the network gateway;
- (d) transmitting the domain name system query from the network gateway to a network for resolution;
- (e) receiving, in the gateway, a response to the domain name system query from the network that includes the frequently accessed domain name and a corresponding IP address; and
- (f) storing the frequently accessed domain name and the corresponding IP address in the cache;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

22. (Currently Amended) A customer premises equipment, comprising:

a memory ~~that stores~~ configured to store files; ~~wherein the files comprise~~
comprising application data files that hold frequently accessed domain names;

a communication interface ~~for transmitting information~~ configured to transmit the
frequently accessed domain names, in a form addressed for delivery to a network

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gateway, to the network gateway configured to cache the frequently accessed domain names in a domain name system cache; and

a processor coupled to the memory and the communication interface; ~~wherein said processor is~~ and configured to search the application data files ~~in the memory~~ to identify the frequently accessed domain names and to provide the frequently accessed domain names to the communication interface ~~for transmission to the network gateway.~~

23. (Previously Presented) The customer premises equipment of claim 22, wherein the memory comprises a hard disk drive.

24. (Previously Presented) The customer premises equipment of claim 22, wherein the communication interface is a home phoneline network interface, an Ethernet interface or a Universal Serial Bus interface.

25. (Previously Presented) The customer premises equipment of claim 22, wherein the application data files are associated with a Web browser application.

26. (Previously Presented) The customer premises equipment of claim 22, wherein the application data files are associated with an electronic mail application.

27. (Previously Presented) The customer premises equipment of claim 22, wherein the processor is configured to provide the frequently accessed domain names

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to the communication interface by packetizing the frequently accessed domain names and providing the packetized information to the communication interface.

28. (Previously Presented) The customer premises equipment of claim 22, wherein the processor is configured to provide the frequently accessed domain names to the communication interface by storing the frequently accessed domain names in a management information base and providing the management information base to the communication interface.

29. (Previously Presented) The customer premises equipment of claim 22, wherein the processor is configured to provide the frequently accessed domain names to the communication interface by generating a domain name system query that includes the frequently accessed domain name and providing the domain name system query to the communication interface.

30. (Previously Presented) A system for selectively caching domain name system information in a network gateway, comprising:

a customer premises equipment (CPE) including a memory that stores files, a communication interface for transmitting information over a communication path, and a CPE processor coupled to the memory and the communication interface, wherein the CPE processor is configured to search the files to identify a frequently accessed domain name and to provide the frequently accessed domain name to the communication interface for transmission over the communication path; and

a network gateway including a cache, a CPE interface for receiving information over the communication path, a network interface for transmitting information over a network, and a gateway processor coupled to the cache, the CPE interface, and the network interface, the gateway processor configured to receive the frequently accessed domain name from the communication path via the CPE interface, to generate a domain name system query that includes the frequently accessed domain name, to provide the query to the network interface for transmission to a network for resolution, to receive a response to the query from the network via the network interface that includes the frequently accessed domain name and a corresponding IP address, and to store the frequently accessed domain name and the corresponding IP address in the cache;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

31. (Previously Presented) The system of claim 30, wherein the memory in the customer premises equipment comprises a hard disk drive.

32. (Previously Presented) The system of claim 30, wherein the communication path is a home phoneline network, an Ethernet, or a Universal Serial Bus.

33. (Previously Presented) The system of claim 30, wherein the application data files are associated with a Web browser application.

34. (Previously Presented) The system of claim 30, wherein the application data files are associated with an electronic mail application.

35. (Previously Presented) The system of claim 30, wherein the CPE processor is configured to provide the frequently accessed domain name to the communication interface by packetizing the frequently accessed domain name and providing the packetized information to said communication interface.

36. (Previously Presented) The system of claim 30, wherein the CPE processor is configured to provide the frequently accessed domain name to the communication interface by storing the frequently accessed domain name in a management information base and providing the management information base to the communication interface.

37. (Previously Presented) The system of claim 30, wherein the network interface transmits the query to a domain name server on the network for resolution.

38. (Previously Presented) The system of claim 30, wherein the gateway processor is configured to generate the domain name system query in accordance with an iterative resolution protocol.

39. (Currently Amended) A ~~computer program product comprising a~~
computer-readable storage device having instructions stored thereon that, upon execution
by a computing device, cause the computing device to perform operations useable
~~medium having computer program logic for enabling a processor in a customer premises~~
~~equipment to identify frequently accessed domain names to be provided to a network~~
~~gateway for use in domain name system caching, the customer premises equipment~~
~~further including a memory and a communication interface, comprising:~~

~~means for enabling the processor to search~~ searching files in ~~the~~ a memory of a
customer premises equipment to identify ~~the~~ frequently accessed domain names; and

~~means for enabling the processor to provide~~ providing the frequently accessed
domain names to ~~the~~ a communication interface in a form addressed for delivery to a
network gateway, the communication interface transmitting the frequently accessed
domain names ~~for transmission~~ to the network gateway configured to cache the
frequently accessed domain names in a domain name system cache;

wherein the files in the memory comprise application data files that hold
frequently accessed domain names.

40. (Currently Amended) The computer-readable storage device ~~program~~
~~product~~ of claim 39, wherein the application data files comprise application data files
associated with a Web browser application.

41. (Currently Amended) The computer-readable storage device ~~program~~ ~~product~~ of claim 39, wherein the application data files comprise application data files associated with an electronic mail application.

42. (Currently Amended) The computer-readable storage device ~~program~~ ~~product~~ of claim 39, wherein ~~the means for enabling the processor to provide~~ providing the frequently accessed domain names to the communication interface comprises ~~means for enabling the processor to packetize~~ packetizing the frequently accessed domain names and ~~provide~~ providing the packetized information to the communication interface.

43. (Currently Amended) The computer-readable storage device ~~program~~ ~~product~~ of claim 39, wherein ~~the means for enabling the processor to provide~~ providing the frequently accessed domain names to the communication interface comprises ~~means for enabling the processor to store~~ storing the frequently accessed domain names in a management information base and ~~provide~~ providing the management information base to the communication interface.

44. (Currently Amended) The computer-readable storage device ~~program~~ ~~product~~ of claim 39, wherein ~~the means for enabling the processor to provide~~ providing the frequently accessed domain names to the communication interface comprises ~~means for enabling the processor to generate~~ generating a domain name system query that includes the frequently accessed domain name and ~~provide~~ providing the domain name system query to the communication interface.

45. (Previously Presented) The method of claim 1, wherein the customer premises equipment comprises a personal computer.

46. (Previously Presented) The method of claim 10, wherein the customer premises equipment comprises a personal computer.

47. (Previously Presented) The method of claim 21, wherein the customer premises equipment comprises a personal computer.

48. (Previously Presented) The customer premises equipment of claim 22, wherein the customer premises equipment is a personal computer.

49. (Previously Presented) The system of claim 30, wherein the customer premises equipment comprises a personal computer.

50. (Currently Amended) The computer-readable storage device ~~program~~ ~~product~~ of claim 39, wherein the customer premises equipment comprises a personal computer.

51. (New) A method comprising:
receiving, at a network gateway device, a frequently accessed domain name in a form addressed for delivery to the network gateway device, the frequently accessed

domain name identified from searched files comprising application data files that hold frequently accessed domain names in a memory of a customer premises equipment; and
caching, at the network gateway device, the frequently accessed domain name in a domain name system cache.

52. (New) The method of claim 51, further comprising:
generating a domain name system query that includes the frequently accessed domain name; and
transmitting the domain name system query from the network gateway to a network for resolution.

53. (New) The method of claim 52, further comprising:
receiving a response to the domain name system query from the network, the response including the frequently accessed domain name and a corresponding IP address;
and
storing the frequently accessed domain name and the corresponding IP address in the domain name system cache.

54. (New) A network gateway, comprising:
a communication interface configured to receive a frequently accessed domain name in a form addressed for delivery to the network gateway, the frequently accessed domain name identified from searched files comprising application data files that hold frequently accessed domain names in a memory of a customer premises equipment; and

a domain name system cache configured to store the frequently accessed domain name.

55. (New) The network gateway of claim 54, wherein the communication interface is further configured to transmit a domain name system query that includes the frequently accessed domain name to a network for resolution.

56. (New) The network gateway of claim 55, wherein the communication interface is further configured to receive a response to the domain name system query from the network, the response including the frequently accessed domain name and a corresponding IP address, and wherein the domain name system cache is further configured to store the frequently accessed domain name and the corresponding IP address in the domain name system cache.